

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BECTON, DICKINSON AND
COMPANY,

Plaintiffs,

V.

BECKMAN COULTER, INC.,

Defendant.

C.A. No. 21-833-CFC

**DEFENDANT’S OPENING BRIEF IN SUPPORT OF ITS
PARTIAL MOTION TO DISMISS FOR FAILURE TO STATE A CLAIM
PURSUANT TO FED. R. CIV. P. 12(b)(6)**

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I. Nature and Stage of Proceedings

On June 7, 2021, Becton, Dickinson and Company (“BD”) filed suit against Beckman Coulter Inc. (“Beckman”) in this Court. BD’s Amended Complaint alleged that Beckman’s CytoFLEX analyzers and sorters infringed four patents in three unrelated patent families. Am. Compl., ¶ 1. This motion concerns a single patent, U.S. Patent No. 7,787,197 (“the ’197 patent”), that makes up one of those families. Am. Compl., ¶ 12. For the reasons discussed below, the ’197 patent is invalid under 35 U.S.C. § 101 as a matter of law. Accordingly, this motion seeks dismissal of the count of BD’s Amended Complaint that relates to that patent for failure to state a claim upon which relief can be granted.

II. Summary of Argument

The ’197 patent is directed to nothing more than the use of “demagnification”—the well-known principle of optics that a lens can make large faraway things look small. Anyone that has looked in the “wrong end” of a telescope or binoculars has seen this principle in action: large things look tiny and large movements are made very small, because of the law of demagnification. The basic principles of geometrical optics underlying this phenomenon were known as early as Euclid and used by Galileo when he was designing telescopes in the early 1600s. The ’197 patent merely applies this observation using generic and conventional optical components. The claimed “optical analyzer” uses the principle of

demagnification to translate the large movements of a “beam-adjusting lens” into precise adjustment of the focal point (*i.e.*, the point on which the lenses focus incoming light). The claims provide nothing more. There is no novel adjustment mechanism, no innovative lens design, and no unique illumination source. Instead, the ’197 patent describes each component of the claims in purely generic terms.

Under well-established principles of patent law, claims to such generic natural relationships and abstract ideas are ineligible for patent protection. At step one of the familiar *Alice* test, they do not become eligible where, as here, the claims “simply instruct one to apply [the natural law or abstract idea] to achieve the desired result.” *American Axle & Manufacturing, Inc. v. Neapco Holdings LLC* (*American Axle I*), 309 F. Supp. 3d 218, 228 (D. Del. 2018), *aff’d in part and vacated in part*, 967 F.3d 1285 (Fed. Cir. 2020) (*American Axle II*). And under *Alice* step two, “simply appending conventional steps, specified at a high level of generality, to laws of nature, natural phenomena, and abstract ideas” falls far short of any “inventive concept” that “in practice amounts to significantly more than a patent upon the ineligible concept itself.” *American Axle II*, 967 F.3d at 1292 (cleaned up); *see also* *Yu v. Apple Inc.*, 1 F.4th 1040, 1045 (Fed. Cir. 2021). These principles apply here, and this Court should find that the ’197 patent is directed to patent-ineligible subject matter.

III. Statement of Facts¹

Beckman and BD are competing manufacturers of flow cytometers and cell sorters. Flow cytometers are devices used to analyze individual cells suspended in a sample fluid. *See, e.g.*, Compl. Ex. 20, ECF No. 1-2, at p. 1-1. A typical flow cytometer has a thin flow channel through which cells suspended in the fluid are passed through one by one. *See id.* A light source (typically one or more laser beams) illuminates each cell, and the light that is scattered by the cell is used to measure the cell's characteristics. *See id.* Cells are often labeled with fluorescent dyes to detect specific structures or processes occurring in each cell. *See id.* In addition to imaging cells, the same technology can be used to sort cells by size, morphology, or biochemical makeup based on their optical properties. *See* Compl. Ex. 21, ECF No. 1-3, at p. 2. Cell sorters are essentially flow cytometers equipped with a nozzle system that can sort individual droplets of cells into separate bins of a collection device. *See* Compl. Ex. 25, ECF No. 1-4, at pp. 1-1, 1-2.

A. The '197 patent

Every claim of the '197 patent recites an “optical analyzer” having a small number of simple components. The only recited components are a “light source,” a “focusing lens,” and “beam-adjusting optics”—such as another lens—that are

¹ For the purposes of this motion only, the Amended Complaint's allegations are assumed to be true.

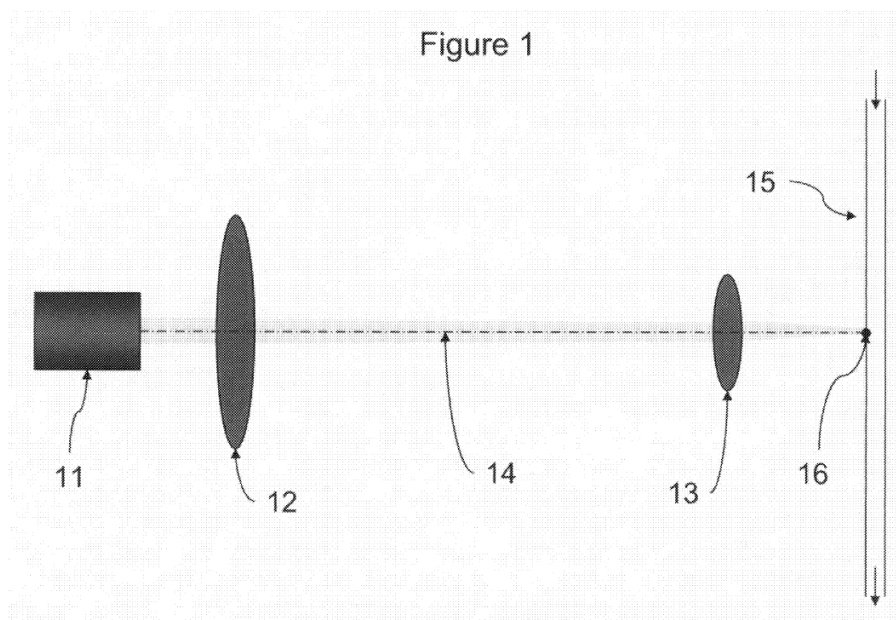
located between the light source and the focusing lens. Claim 1 recites:

1. An optical analyzer comprising:
 - (a) a light source adapted to emit an approximately collimated light beam along a light path;
 - (b) a focusing lens positioned in the light path, adapted to focus the light beam onto a focal spot within a sample analysis region, wherein said focusing lens has a focal length f_1 ,
 - (c) beam-adjusting optics positioned in the light path between the light source and the focusing lens, wherein said beam-adjusting optics comprises at least one beam-adjusting lens that is mounted in a positioning device that allows movement of the beam-adjusting lens in a plane perpendicular to the light path, wherein said beam-adjusting lens has a focal length f_2 , wherein said beam-adjusting lens and said focusing lens are separated by a distance z along the light path, and wherein $|f_2 - z| \geq 4 \cdot f_1$.

'197 patent, 9:55-10:9.

Claim 1 is representative of the claims of the '197 patent. It is not limited to flow cytometers. Instead, it is broadly directed to a generic optical analyzer that can be used in any application. The words “flow cytometer” never appear in the claims at all. *See id.* at 9:55-10:59 (claiming “[a]n optical analyzer” without limiting the field of use). Flow cytometry is simply one of the possible applications of the “optical analyzer” claimed in the '197 patent. *See, e.g.,* '197 patent, 2:23-26 (stating that “[i]n a preferred embodiment, the optical analyzer is a flow cytometer”).

Figure 1 of the patent depicts, in schematic form, the relationship among the components of the “optical analyzer”:



The depicted apparatus is simple. A light source (11) projects an “approximately collimated” beam of light, *i.e.*, a beam having rays that are approximately parallel to a light path (14), through a beam-adjusting lens (12). The beam-adjusting lens steers the beam of light to a portion of a focusing lens (13). That lens, in turn, focuses the beam of light onto a focal spot (16). The “positioning device” in the claims is not shown; beam-adjusting lens (12) is mounted in it and can move perpendicular to the light path (14).

As the patent explains, when “lens 12 [the beam-adjusting lens] has a focal length much longer than the focal length of lens 13 [the focusing lens] and the distance between the lenses,” then moving the beam-adjusting lens by a lot has the effect of moving the focal spot by only a little—“the displacement of the focal spot is greatly reduced relative to the displacement of the beam-adjusting lens 12.” *Id.* at

6:57-7:3. The patent does not allege that this is a new optical principle; to the contrary, it states that the “[t]he displacement of the focal spot” can be determined using “well-known” techniques. *See id.* at 8:27-35. The relevance of this principle to imaging devices in general, including flow cytometers, is that it allows very fine adjustment of the “focal spot”—the point on which the laser is focused, such as a sample being tested—without the need for such precise adjustment of the beam-adjustment lens. As the specification explains, the “reduced sensitivity of the focal spot adjustment to movement of the beam-adjusting lens enables obtaining a high degree of precision over the adjustment of the focal spot using less expensive lens adjusting mechanisms with less precise motion control.” *Id.* at 7:3-7.

Claim 1 sets forth the mathematical expression that is at the heart of the purported invention, and shows why it is merely a claim to a law of nature: “ $|f_2 - z| \geq 4 \cdot f_1$.” The terms f_1 and f_2 are the “focal length” of the “focusing lens” and the “beam adjusting lens,” respectively—that is, the distance from the lenses to the points on which they focus beams of light. In simple terms, this expression is intended to capture the well-known mathematical relationship between the focal lengths of those two lenses and the distance between the lenses that the specification describes, where the beam-adjusting lens has a focal length much longer than the focal length of the focusing lens and the distance between the lenses.

B. The components of the '197 patent

To this simple idea, the claims of the '197 patent add nothing more than a collection of generic, conventional optical components—light sources, focusing optics, and mechanical devices—all of which are acknowledged to be well-known in the art.

First, the '197 patent explains that the claimed “light source” is not limited to lasers, and that “[l]ight sources suitable for use in optical analyzers are well known in the art and commercially available from a large number of sources.” *Id.* at 5:28-30. For example, “arc lamps” and “light emitting diodes” can be suitable light sources, and “[i]t will be understood that the light source may include collimating optics.” *Id.* at 5:30-34.

Second, the '197 patent admits that the claimed “focusing lenses” are “standard elements well-known in the art and commercially available from a large number of sources.” *Id.* at 5:39-41. Such focusing optics can consist of a “single element” or “additional[ly] comprise other elements, such as beam shaping optics.” *Id.* at 5:51-57.

Third, the '197 patent also describes the claimed “beam-adjusting lens” in broad terms. The specification merely states that “[t]he beam-adjusting optics of the present invention comprises at least one movable focusing lens, mounted in a positioning device that allows repositioning of the lens in a plane perpendicular to

the light path.” *Id.* at 5:18-22. Thus, the beam-adjusting lens is a combination of a second focusing lens and a “positioning device.” The patent explains that the beam-adjusting lens can be a spherical lens or a cylindrical lens, *see id.* at 2:55-60, but these lens geometries are generic descriptions of lens types that have been known for centuries. The independent claims are not limited to any particular type of lens geometry, *see id.* at 9:55-10:9, demonstrating that the principle to which the claims are directed is not so limited either. The patent provides no further elaboration on the nature or structure of the “positioning device,” other than alluding to the use of “simple screw-type positioning systems,” which the patent also does not assert is somehow novel. *Id.* at 2:45-47. In fact, as noted above, such a positioning device is entirely omitted from the figures of the patent. *See generally id.* figs. 1-4.

Thus, the ’197 patent by its own admission claims nothing more than well-known and generically recited optical components, arranged in a manner that implements a fundamental principle of optics. The patent asserts that the focus of the claimed advance is an illumination system in which the “reduced sensitivity of the focal spot adjustment to movement of the beam-adjustment lens” “enables obtaining a high degree of precision over the adjustment of the focal spot using less expensive lens adjusting mechanisms with less precise motion control.” *Id.* at 7:3-7; *id.* at 9:49-53.

IV. Argument

A. Legal Standards

To survive a motion to dismiss under Rule 12(b)(6), “a complaint must contain sufficient factual matter, accepted as true, to ‘state a claim to relief that is plausible on its face.’” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 554, 570 (2007)). Under that standard, “bald assertions, unsupported conclusions or unwarranted inferences” are not presumed true. *LoganTree LP v. Omron Healthcare, Inc.*, C.A. No. 18-1617-MN, 2019 WL 4538730, at *1 (D. Del. Sept. 19, 2019). And the complaint must contain more than a “formulaic recitation of the elements of a cause of action.” *Iqbal*, 556 U.S. at 678.

“Subject matter eligibility under [35 U.S.C.] § 101 may be determined at the Rule 12(b)(6) stage of a case.” *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 765 (Fed. Cir. 2019). Dismissal under Rule 12(b)(6) for lack of patent eligibility is appropriate “when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.” *Id.* (quoting *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018)). “[I]n ruling on a 12(b)(6) motion, a court need not accept as true allegations that contradict matters properly subject to judicial notice or by exhibit, such as the claims and the patent specification.” *Yu v. Apple*, 1 F.4th at 1046 (quoting *Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 913 (Fed. Cir. 2017)).

B. The *Alice* test

Laws of nature, abstract ideas, and natural phenomena are not patentable. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014); *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012). To determine whether a patent claims ineligible subject matter, courts apply the now-familiar two-step framework set forth in *Alice*. In step one, the Court must “determine whether the claims at issue are directed to one of [the] patent-ineligible concepts,” including natural laws or abstract ideas. *Alice*, 573 U.S. at 217. Claims “directed to a result or effect that itself is the [natural law or] abstract idea and merely invoke[s] generic processes and machinery” are patent ineligible. *Smart Sys. Innovations, LLC v. Chi. Transit Authority*, 873 F.3d 1364, 1371 (Fed. Cir. 2017); *American Axle II*, 967 F.3d at 1297 (explaining that “the same principle necessarily applies in natural law cases”). “Even a specification full of technical details about a physical invention may nonetheless conclude with claims that claim nothing more than a broad law or abstract idea underlying the claims.” *ChargePoint*, 920 F.3d at 769.

If at *Alice* step one the claims are directed to a patent-ineligible concept, at step two, the Court must “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform

the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78-79). At both steps, as explained below, the ’197 patent fails the test for patent eligibility as a matter of law.

C. The claims of the ’197 patent are directed to patent-ineligible subject matter

1. The claims of the ’197 patent are directed to the natural law of demagnification

The ’197 patent is directed to the natural law of demagnification. At *Alice* step one, the court must look to the “focus of the claimed advance” and determine whether the claims are “directed to” a law of nature. *American Axle II*, 967 F.3d at 1292 (quoting *Trading Techs. Int’l, Inc. v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019)). Where, as here, the claims recite “‘a mathematical formula’” and conventional components “at a high level of generality,” courts “have consistently rejected such claims as unpatentable.” *Id.* at 1296-97 (first quoting *Diamond v. Diehr*, 450 U.S. 175, 191 (1981); and then quoting *Mayo*, 566 U.S. at 82). The claims here readily meet this standard. They are directed to nothing more than the idea—a law of nature—that when one lens has a focal length much longer than the focal length of a second lens and the distance between the lenses, moving the first lens by a large amount causes the focal spot to move by a smaller amount. Simply put, the ’197 patent’s use of this principle in a generic “optical analyzer” is not eligible for patenting because the claims are directed to a basic principle of optics.

The Federal Circuit recently reaffirmed these legal principles, as they apply to laws of nature, in *American Axle II*, a case involving a basic natural law like the one at issue here. In that case, the court considered a patent directed to manufacturing driveshafts that involved “tuning a mass and a stiffness” of an axle liner. *Id.* at 1293. The claimed process made “use of a natural law of relating frequency to mass and stiffness—i.e., Hooke’s law.” *Id.* at 1294. As the court explained, “[i]n contrast to a number of other natural law cases,” the patentee did not “claim to have discovered a previously unknown natural law.” *Id.* at 1293. Nor did the claim identify “particular [tuned] liners” or any specific “improved method” of tuning the liners to achieve the claimed result. *Id.* at 1294. Accordingly, the court rejected the patent owner’s argument that it had discovered improved processes for tuning liners, because “neither established processes nor ‘improved’ processes for implementing the underlying natural laws [were] claimed.” *Id.* at 1294-95.

The court also stressed that claims involving an “application of a natural law” without limitations to a “particular method” “run[] headlong into the very problem repeatedly identified by the Supreme Court in its cases shaping eligibility analysis.” *Id.* at 1295. Such claims “that encompass[] all solutions for achieving a desired result” have frequently been held ineligible under § 101. *Id.* at 1296-97. “Simply appending conventional steps, specified at a high level of generality, to laws of nature, natural phenomena, and abstract ideas cannot make those laws, phenomena,

and ideas patentable.” *Id.* at 1297 (emphasis in original) (quoting *Mayo*, 556 U.S. at 82). And “when a claim recites a mathematical formula (or scientific principle or phenomenon of nature), an inquiry must be made into whether the claim is seeking patent protection for that formula in the abstract.” *Id.* (emphasis in original) (quoting *Diehr*, 450 U.S. at 191).

The claimed advance of the ’197 patent raises the same eligibility problem because it amounts to nothing more than a similarly straightforward application of the previously-known natural law of demagnification. As in *American Axle*, the ’197 patent does not purport to claim a newly discovered natural law. Instead, the ’197 patent treats the principles of geometric optics as given. *See, e.g.*, ’197 patent, 4:14-16 (stating that “all terms are used as is common in the art”); *id.* at 6:44-50 (providing, without elaboration, the equation for magnification). The patent also admits that “[t]he displacement of the focal spot induced by a displacement of one of the lenses . . . can be obtained from an analysis . . . using the well-known ray tracing technique of ray transfer matrix analysis.” *Id.* at 8:27-35. Nothing in the specification suggests any departure from well-known optical principles.

Also like the patent in *American Axle*, the ’197 patent simply applies the well-known natural law to a generically claimed desired result—a tunable illumination system. In fact, the specification emphasizes the level of generality of the claims, stating that “the present disclosure is to be considered as exemplary of the *principles*

of the invention and is not intended to limit the invention to the embodiments illustrated.” *Id.* at 5:62-67 (emphasis added). And as explained above, the patent admits that each component of the claims is well known; there is nothing more to them than the basic two-lens system that makes the principle of demagnification work. The claimed structure is simply a configuration of two generic lenses where the first lens has a focal length that is much longer than either the focal length of the second lens or the distance between the lenses, a principle captured in the recited mathematical inequality “ $|f_2 - z| \geq 4 \cdot f_1$.” The “beam-adjusting optics” that form the focus of claim 1 are only described in generic, functional terms. The focal length of a lens is an intrinsic property that has been understood for centuries, and beyond setting forth the simple mathematical relationship between the two lenses’ focal lengths and the distance between them, the claims fail to specify any novel or inventive way that relationship is to be achieved. Similarly, the claimed “lens positioning mechanism” is completely devoid of any structural limitations. *Id.* at 2:44-48. As discussed above, any description of a “lens positioning mechanism” is simply absent from the detailed description and figures of the patent. And nothing about the recited cutoff value of “4” in “ $4 \cdot f_1$ ” is described as critical to the principle; the specification acknowledges that the principle is a general one and also recites “2,” and claim 2 recites “6.” *Id.* at 7:1-3, 9-11; claim 2.

The absence of “improved” or “novel” features beyond the result of the natural

law supports a conclusion that the natural law is all the claims are directed to. *American Axle II*, 967 F.3d at 1294-95; see *Yu v. Apple*, 1 F.4th at 1043 (holding at *Alice* step one that a claim was directed to patent-ineligible subject matter when it provided only “well-known and conventional” components). At the heart of the claims is an expressly recited mathematical formula ($|f_2 - z| > 4 \cdot f_1$) that seeks patent protection for the idea of a demagnifying illumination system in the abstract. Nothing in the claims limits the ’197 patent to any particular mechanism for a tunable illumination system. The claims fall squarely within the type of claims that courts have consistently held to be patent-ineligible, in multiple respects.

Finally, a repeated focus of section 101 case law is whether the claims would preempt activity in the relevant field beyond a specific, inventive application. *Alice*, 573 U.S. at 216; *American Axle II*, 967 F.3d at 1296 (noting that claims that “encompassed all solutions for achieving a desired result” are patent-ineligible). The claims of the ’197 patent pose this problem because they are not directed to a specific application of the optical principle of magnification and would preempt the kind of activity that physicists have been performing for centuries.² The specification of the

² Although the specification discusses the application of the system in terms of flow cytometers, the claims themselves are directed to a generic “optical analyzer” that can be used in any application. ’197 patent, 9:55-10:9. As the Federal Circuit explained, “features that are not claimed are irrelevant” to this analysis. *American Axle II*, 967 F.3d at 1293. Furthermore, “[a] mathematical formula does not suddenly become patentable subject matter simply by having the

'197 patent, in fact, incorporates by reference a well-known optical textbook that illustrates just how the claim might read on general scientific activities outside any one particular application. '197 patent, 8:27-35 (citing Warren J. Smith, *Modern Optical Engineering: The Design of Optical Systems* (2nd ed 1996)). Smith, which is attached as Exhibit A to the Declaration of Adam Pan, teaches a “lens bench” that, given selection of the claimed parameters, easily could fall within the scope of claim 1. Smith teaches that a lens bench, which is used to measure various properties of a lens, consists of “a collimator . . . , a device for holding the optical system [*i.e.*, a lens] under test, a microscope for the examination of the image formed by the system, and a means for supporting these components.” Smith (Ex. A to Pan Decl.) at 494. Smith explains that the optical elements are typically mounted on “at least one micrometer slide, and frequently two or three orthogonal slides so that accurate measurements may be made.” *Id.* Given focal lengths and distances within the claims, such a device would meet every limitation of claim 1. The collimator is a “light source adapted to emit an approximately collimated light beam,” the microscope contains at least one “focusing lens adapted to focus the light beam onto a focal spot,” the test lens is a “beam-adjusting optic[] positioned in the light path

applicant acquiesce to limiting the reach of the patent for the formula to a particular technological use.” *Id.* at 1297-98 (quoting *Diehr*, 450 U.S. at 191-92 & n.14).

between the light source and the focusing lens,” and the lens holder is a “positioning device that allows movement . . . in a plane perpendicular to the light path.”

As such, this Court should find that the claims of the ’197 patent is directed to a natural law.

2. The claims of the ’197 patent are directed to the result of an abstract idea

In addition to claiming a natural law, the claims here also are ineligible because they are directed to an abstract idea. Like natural laws, abstract ideas are ineligible for patent protection. *American Axle II*, 967 F.3d at 1292. The Federal Circuit has explained that, in determining whether a patent is directed to an abstract idea, courts should ignore “conventional components perform[ing] only their basic functions” and consider whether the claims are “directed to a result or effect that itself is the abstract idea.” *Yu v. Apple*, 1 F.4th at 1043. Here, the claimed result of a “reduced sensitivity of the focal spot adjustment to movement of the beam-adjusting lens,” is nothing more than the application of the mathematical principle reflected in the expression recited in the specification, $|f_2 - z| > 4 \cdot f_1$. That fails the *Alice* step one test for this independent reason.

The claims’ recitation of generic optical components used in a generic way does not save them from being directed to an abstract idea and thus does nothing to render them patent-eligible. In this respect, this case is analogous to the Federal Circuit’s recent decision in *Yu v. Apple*, 1 F.4th 1040. In *Yu*, the Federal Circuit held

that a claim to a camera device that “us[ed] multiple pictures to enhance each other” was directed to a patent-ineligible abstract idea. *Id.* at 1043-45. The patentee argued that the claim was patent-eligible because it recited a “particular configuration of lenses and image sensors.” *Id.* at 1044. The court rejected that argument, finding that although the specification touted specific advantages of a “four-lens, four-image-sensor configuration,” the claims simply required a generic “two-lens, two-image-sensor configuration.” *Id.* at 1044. “In these circumstances, the mismatch between the specification statements . . . and the breadth of claim 1 underscores that the focus of the claimed advance is the abstract idea and not the particular configuration discussed in the specification” *Id.* at 1045.

The same is true here. As discussed above, although the ’197 patent specification may envision use in flow cytometers (which is in any event merely a field of use, not a “particular configuration”), the claims themselves are expansive in scope. As in *Yu v. Apple*, “the breadth of claim 1 underscores that the focus of the claimed advance is the abstract idea and not [any] particular configuration discussed in the specification.” *Id.*; *see also* ’197 patent, 5:62-67 (“While this invention is satisfied by embodiments in many different forms, . . . the present disclosure is to be considered exemplary of the principles of the invention and is not intended to limit the invention to the embodiments illustrated.”).

D. Nothing in the claims of the ’197 patent qualifies as an “inventive

concept” for the purposes of patent eligibility

At *Alice* step two, the Court must determine whether the “elements of each claim both individually and ‘as an ordered combination’” supply an “inventive concept” sufficient to transform the claims into a patent-eligible invention. *Alice*, 573 U.S. at 217, 221. The “inventive concept” itself cannot be an abstract idea or natural law, “no matter how groundbreaking the advance.” *Trading Techs.*, 921 F.3d at 1385 (quoting *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1171 (Fed. Cir. 2018)). To supply an inventive concept, the additional claim elements “must be more than ‘well-understood, routine, conventional activity.’” *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (quoting *Mayo*, 566 U.S. at 79). The determination of whether the claim elements are well-understood, routine, or conventional is a factual inquiry, but “in ruling on a 12(b)(6) motion, a court need not accept as true allegations that contradict matters properly subject to judicial notice or by exhibit, such as the claims and the patent specification.” *Yu v. Apple*, 1 F.4th at 1046 (quoting *Secured Mail*, 873 F.3d at 913).

Here, regardless of whether the ’197 patent is directed to a natural law or an abstract idea, the analysis is simple and the conclusion is the same. Only conventional optical components are recited. Indeed, the ’197 patent concedes that all of its elements are well-understood, routine, and conventional. And nothing in the generic language of the claims suggests that these components operate anything

beyond their basic functions. *See, e.g.*, '197 patent, 9:56-57 (claiming “a light source adapted to emit an approximately collimated light beam”); *id.* at 9:58-59 (claiming “a focusing lens positioned in the light path, adapted to focus the light beam onto a focal spot”). Here, the “claimed hardware configuration itself is not an advance.” *Yu v. Apple*, 1 F.4th at 1045 (emphasis omitted). Instead, the sole “inventive” feature of the ordered combination of elements recited in the claims is the ability to make demagnified focus adjustments. That is insufficient to confer patent eligibility at step two. *See American Axle II*, 967 F.3d at 1299; *Trading Techs.*, 921 F.3d at 1385.

As such, even considered as an ordered combination, the claim limitations of the '197 patent do not recite an inventive concept and thus do not amount to patent-eligible subject matter.

V. Conclusion

The “invention” of the '197 patent is nothing more than an abstract mathematical formula based on the natural law of demagnification. But neither mathematical formulas nor natural laws are patent-eligible. Furthermore, the claims are devoid of any inventive concept. Instead, the patent itself concedes that the claimed “optical analyzer” consists only of well-known combinations of generic optical components. Under the *Alice* test, such claims are clearly patent-ineligible. BD's claim of infringement of the '197 patent should therefore be dismissed in its entirety.

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CERTIFICATE OF COMPLIANCE

Pursuant to the Court's November 6, 2019 Standing Order, I hereby confirm that this brief complies with the type and number limitations set forth in the Standing Order. I certify that this document contains 4,903 words, which were counted using the word count feature in Microsoft Word, in 14-point Times New Roman font.

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